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AB BACKGROUND: T helper-type 2 cytokines, such as interleukin-4 (IL-4) and IL-13, may play a central role in allergic diseases. The protein known as 'signal transducers and activators of transcription 6' (STAT-6) is a key transcription factor involved in both IL-4- and IL-13-mediated biological responses. OBJECTIVE: The objective of this study was to evaluate the possible role of the STAT-6 gene in modulating atopy in the Japanese population. METHODS: We screened all 23 exons of the STAT-6 gene from 10 subjects for mutations by direct polymerase chain reaction (PCR) sequencing. The STAT-6 gene polymorphisms were genotyped by PCR fragment length polymorphism analysis and PCR-SSCP analysis. The IL-4 receptor Q576R polymorphism was also examined by PCR-SSCP analysis. RESULTS: We found a novel dinucleotide repeat polymorphism in the first exon of the STAT-6 gene. The genotypes were classified into four groups according to the number of GT repeats present, from 13 to 16. The frequency of the A1 allele (326 bp, containing 13 repeats of GT) was higher in children with allergic diseases (bronchial asthma, atopic dermatitis and/or food-related anaphylaxis) than controls, although this was not statistically significant ( $P = 0.0158$ ). In addition, a strong association between the A1 and A3 allele (containing 15 repeats of GT) heterozygote and allergic diseases was identified ( $P = 0.0002$ ). However, the levels of IgE were not related to the GT repeat polymorphism in the allergic subjects. The GT repeat polymorphism was not associated with the polymorphism in the IL-4 receptor  $\alpha$  chain gene (Q576R) and there was no association between the G2964A variant and allergic diseases. CONCLUSION: This suggests that genetic variation in the STAT-6 gene may be associated with predisposition to allergic diseases.

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FILE 'MEDLINE, CAPLUS, BIOSIS' ENTERED AT 11:36:16 ON 09 SEP 2009

L1 5 S (STAT(W)6) AND (DINUCLEOTIDE)  
L2 1 S (STAT(W)6) AND (DINUCLEOTIDE) AND HAPLOTYPE?  
L3 3 DUP REM L1 (2 DUPLICATES REMOVED)

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L2 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2009 ACS on STN  
TI Dinucleotide polymorphism in human STAT-6  
gene associated with susceptibility to atopic diseases

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FILE 'MEDLINE, CAPLUS, BIOSIS' ENTERED AT 11:36:16 ON 09 SEP 2009  
L1 5 S (STAT(W)6) AND (DINUCLEOTIDE)  
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L3 3 DUP REM L1 (2 DUPLICATES REMOVED)

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FILE 'MEDLINE, CAPLUS, BIOSIS' ENTERED AT 11:36:16 ON 09 SEP 2009  
L1 5 SEA ABB=ON PLU=ON (STAT(W) 6) AND (DINUCLEOTIDE)  
L2 1 SEA ABB=ON PLU=ON (STAT(W) 6) AND (DINUCLEOTIDE) AND  
HAPLOTYPE?  
L3 3 DUP REM L1 (2 DUPLICATES REMOVED)  
D L3 TI 1-3  
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FILE MEDLINE

FILE LAST UPDATED: 8 Sep 2009 (20090908/UP). FILE COVERS 1949 TO DATE.

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[http://www.nlm.nih.gov/pubs/techbull/nd08/nd08\\_medline\\_data\\_changes\\_2009](http://www.nlm.nih.gov/pubs/techbull/nd08/nd08_medline_data_changes_2009).

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FILE CAPLUS

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